

**WE CLAIM:-**

- 5 1. A method of establishing a virtual channel connection between first and second nodes in a communications network, the method comprising;
- at the first node, sending a connection request to the second node, said request incorporating a path identifier for a virtual channel to be used for the connection;
- 10 at the second node, determining whether the path identifier is acceptable to the second node for establishing the connection; and
- at the second node, where said path identifier is not acceptable to the second node, returning to the first node a negotiation request message incorporating a new path identifier for an alternative virtual channel to be used for the connection.
- 15 2. A method as claimed in claim 1, and further comprising;
- at the first node determining whether the new path identifier is acceptable to the first node for establishing the connection; and, where the new path identifier is acceptable to the first node, returning to the second node a negotiation confirm message incorporating the new path identifier to be used for the connection.
- 20 3. A method as claimed in claim 2, wherein, where said new path identifier is not acceptable to the first node, a release complete message is returned to the second node to release resources reserved for the call and to cause the call attempt to be aborted.
- 25 4. A method as claimed in claim 3, wherein at least one said node comprises a service endpoint.
- 30 5. A method as claimed in claim 3, wherein at least one said node incorporates a resource pool, said resource pool being shared between a plurality of port and switch modules.
- 35 6. A method as claimed in claim 4, wherein signalling between said first and second nodes is effected over a designated signalling channel.

7. A method as claimed in claim 5, wherein a new connection directed to a said port and switch module without spare capacity is re-directed to another said port and switch module currently having spare capacity.
- 5 8. A method as claimed in claim 6, wherein said virtual channel connection is an ATM Adaptation Layer Two (AAL2) connection.
9. A method of establishing a virtual channel connection between first and second nodes in a communications network, the method comprising negotiating between  
10 said first and second nodes whereby to determine a mutually acceptable path identifier for a virtual channel to be used for the connection.
10. An arrangement for establishing a virtual channel connection between first and second nodes in a communications network, the arrangement comprising first  
15 and second signalling server means disposed respectively at said first and second nodes, said signalling server means being arranged to perform a negotiation responsive to a connection request whereby to determine a mutually acceptable path identifier for a virtual channel to be used for the connection.
- 20 11. An arrangement for establishing a virtual channel connection between first and second nodes in a communications network, the arrangement comprising;  
first signalling server means at the first node for sending a connection request over a signalling channel to the second node, said request incorporating a path identifier for a virtual channel to be used for the connection;  
25 second signalling server means at the second node for determining whether the path identifier is acceptable to the second node for establishing the connection; and, where said path identifier is not acceptable to the second node, for returning to the first node a negotiation request message incorporating a new path identifier for an alternative virtual channel to be used  
30 for the connection.
12. An arrangement as claimed in claim 11, wherein said first signalling server means at the first node includes means for determining whether the new path identifier is acceptable to the first node for establishing the connection; and,  
35 where said new path identifier is acceptable to the first node, for returning to the second node a negotiation confirm message incorporating the said new path identifier to be used for the connection.

13. An arrangement as claimed in claim 12, wherein said first signalling server means at the first node includes means for returning to the second node a release complete message to release any resources reserved for the call and to  
5 cause the call attempt to be aborted where said new path identifier is not acceptable to the first node.
14. A communications network node incorporating a plurality of port and switch modules, and a signalling server whereby virtual circuit connections may be  
10 established via said port and switch modules and an adjacent network node, wherein said port and switch modules are arranged each to handle a proportion of the total aggregated traffic transported between the network node and the adjacent network node.
15. A communications node as claimed in claim 14, and incorporating a plurality of TDM modules for interfacing with a TDM network.
16. A communications node as claimed in claim 15, and wherein direct connections may be made between the port and switch modules and the TDM modules  
20 without loss of connectivity.
17. A communications node as claimed in claim 14, and incorporating a resource pool accessible to the port and switch modules.
18. A communications node as claimed in claim 17, and wherein direct connections may be made between ports of the AAL2 port and switch modules and the ports of the resource pool without loss of connectivity.
19. Software on a storage medium in machine readable form for performing the  
30 method as claimed in claim 1.